

## TRANSCODING IN DATA COMMUNICATIONS

### ABSTRACT

Methods and apparatus are provided for transcoding a data message, comprising a plurality of data fields (f1-f10) and an authentication code (Sgn(h1-10)), to produce a transcoded message for transmission to a destination device (4). The transcoding methods can be applied to such a data message which is received from a source device (1) wherein said data fields (f1-f10) have been coded in accordance with a first coding system, whereby respective data field codes (h1-h10) are generated for said data fields (f1-f10) and a message code (h1-10) is derived from said data field codes (h1-h10), and wherein said message code (h1-10) has been coded in accordance with a second coding system to generate said authentication code (Sgn(h1-10)). For each data field (f1-f10) of the received data message it is decided whether to maintain, modify or omit that field. For a field to be maintained, that field is maintained in the transcoded message. For a field to be omitted, that field is coded in accordance with said first coding system to generate an omitted field code dependent upon the data field code (h) for that field, and that field is replaced by said omitted field code in the transcoded message. For a field to be modified, that field is coded in accordance with said first coding system to generate a modified field code dependent upon the data field code (h) for that field, and that field is replaced by a modified field, comprising modified data (f') and said modified field code, in the transcoded message. The received authentication code (Sgn(h1-10)) is also included in the transcoded message. Sufficient information is thereby included in the transcoded message to enable the destination device to verify the transcoding operation.